

What is claimed is:

1. An illumination system for use in a device having a plurality of key buttons disposed in a plurality of key locations, said illumination system comprising:

5 a light source for providing light; and  
a light conduit adapted to receive at least a portion of the provided light, the light conduit having:

10 a light guiding section for conveying the received light to areas near the key locations, wherein the light guiding section has two substantially flat boundaries for allowing the received light to propagate between the boundaries via reflection, and

15 a plurality of light escape elements disposed in the light guiding section and located in the areas near the key locations to allow portions of the received light to escape from the light guiding section for illuminating the key buttons.

20 2. The illumination system of claim 1, wherein the device further comprises a display, and the light conduit further comprises a light escapement section located near the display and extended from the light guiding section of the light conduit to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

25 3. The illumination system of claim 1, wherein the device further comprises a display, said illumination system further comprising a light escapement member located near the display and optically coupled to the light guiding section of the light conduit for further conveying the received light to the light escapement member for illuminating the display.

30 4. The illumination system of claim 1, wherein the device further comprises a display, the light conduit further comprising a further light guiding section having a first end located near the light source for receiving said portion of the provided light and a second end optically coupled to the light guiding section for conveying a part of the

received light to the light guiding section, wherein the further light guiding section has a plurality of further light escape elements disposed near the display to allow a further part of the received light to escape from the further light escape elements for illuminating the display.

5           5.       The illumination system of claim 1, wherein the light source comprises a light-emitting diode.

10           6.       The illumination system of claim 1, wherein the light source comprises a laser diode.

            7.       The illumination system of claim 1, wherein the light source comprises an optical fiber illumination device.

15           8.       The illumination system of claim 1, wherein the light source comprises an incandescent lamp.

            9.       The illumination system of claim 1, wherein the light source comprises a fluorescent lamp.

20           10.      The illumination system of claim 1, wherein the two boundaries are substantially parallel to each other.

25           11.      The illumination system of claim 1, wherein at least one of the two boundaries is a dense-rare boundary.

            12.      The illumination system of claim 1, wherein at least one of the two boundaries is coated or treated for reflection enhancement.

30           13.      The illumination system of claim 1, wherein the device further comprises a display, and the light conduit further comprises a light escapement section located near

the display, and wherein the light guiding section has a first end located near the light source for receiving said portion of the provided light and a second end optically coupled to the light escapement section to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

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14. A light conduit for use in a device having a display, a plurality of key buttons disposed in a plurality of key locations and a light source for providing light, said light conduit adapted to receive at least a portion of the light provided by the light source, said light conduit comprising:

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a light guiding section for conveying the received light to areas near the key locations, wherein the light guiding section has two substantially flat boundaries for allowing the received light to propagate between the boundaries via reflection, and

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a plurality of light escape elements disposed in the light guiding section and located in the areas near the key locations to allow portions of the received light to escape from the light guiding section for illuminating the key buttons.

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15. The light conduit of claim 14, further comprising a light escapement section located near the display and extended from the light guiding section to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

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16. The light conduit of claim 14, further comprising a light escapement section located near the display and optically coupled to the light guiding section to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

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17. The light conduit of claim 14, further comprising a further light guiding section having a first end located near the light source for receiving said portion of the provided light and a second end extended from the light guiding section for conveying a part of the received light to the light guiding section, wherein the further light guiding section has a plurality of further light escape elements disposed near the display to allow a further part

of the received light to escape from the further light escape elements for illuminating the display.

18. The light conduit of claim 14, further comprising a further light guiding section  
5 having a first end located near the light source for receiving said portion of the provided light and a second end optically coupled to the light guiding section for conveying a part of the received light to the light guiding section, wherein the further light guiding section has a plurality of further light escape elements disposed near the display to allow a further part of the received light to escape from the further light escape elements for illuminating  
10 the display.

19. The light conduit of claim 14, wherein the two boundaries are substantially parallel to each other.

20. The light conduit of claim 14, wherein at least one of the two boundaries is a dense-rare boundary.

21. The light conduit of claim 14, wherein at least one of the two boundaries is a coated surface.

22. The light conduit of claim 14, wherein at least one of the light escape elements in the light guiding section is a multi-facet dent in one of the two boundaries.

23. The light conduit of claim 22, wherein the multi-facet dent has at least one  
25 reflection surface.

24. The light conduit of claim 22, wherein the multi-facet dent has at least one surface coated for reflection enhancement.

25. The light conduit of claim 14, wherein at least one of the light escape elements in the light guiding section comprises a plurality of micro-lenses.

26. The light conduit of claim 17, wherein the further light escape elements comprise step surfaces for reflection.

27. The light conduit of claim 18, wherein the further light escape elements comprise step surfaces for reflection.

28. The light conduit of claim 26, wherein the step surfaces comprise surfaces coated with a reflective material.

29. The light conduit of claim 27, wherein the step surfaces comprises surfaces coated with a reflection material.

30. A portable device comprising:  
a display;  
a plurality of key buttons disposed in a plurality of key locations;  
a light source for providing light; and  
a light conduit adapted to received at least a portion of the provided light from the light source, the light conduit having:

a light guiding section for conveying the received light to areas near the key locations, wherein the light guiding section has two substantially flat boundaries for allowing the received light to propagate between the boundaries via reflection, and

a plurality of light escape elements disposed in the light guiding section and located in the areas near the key locations to allow portions of the received light to escape from the light guiding section for illuminating the key buttons.

31. The portable device of claim 30, wherein the light conduit further comprises a light escapement section located near the display and extended from the light guiding section to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

32. The portable device of claim 30, wherein the light conduit further comprises a light escapement section located near the display and optically coupled to the light guiding section to allow a further portion of the received light to escape from the light escapement section for illuminating the display.

33. The portable device of claim 30, wherein the light conduit further comprises a further light guiding section having a first end located near the light source for receiving said portion of the provided light and a second end optically coupled to the light guiding section for conveying a part of the received light to the light guiding section, wherein the further light guiding section has a plurality of further light escape elements disposed near the display to allow a further part of the received light to escape from the further light escape elements for illuminating the display.

34. The portable device of claim 30, comprising an electronic device.

35. The portable device of claim 30, comprising a telecommunications device.

36. The portable device of claim 30, comprising a mobile terminal.

37. The portable device of claim 30, further comprising  
a data stream generating device for generating data for communication with an external device,  
a further light source operatively connected to the data stream generating device  
for providing optical signals indicative of the data, and  
a data transmission point optically coupled to the light conduit, wherein the light conduit is further adapted to receive at least a portion of the optical signals for conveying at least a portion of the receive optical signals to the transmission point so as to allow the portable device to transmit the data via the optical signals to the external device.

38. The portable device of claim 37, wherein the further light source is an infrared light source.